

CLAIMS

1. Active matrix display device (6) comprising:
 - a display (2) with a plurality of display pixels (3);
 - a data input (10) for receiving a data signal;
 - a controller (7) for distributing said data signal over said display pixels (3) to generate an image on said display (2) with an overall brightness value for each display pixel (3) during at least one frame period (F),
wherein said device (6) is adapted to divide said frame period (F) for at least one subset (S) of said display pixels (3) such that said display pixels (3) of said at least one subset (S) have at least a light output (L) at a first non-zero brightness level (L1) during a first sub-period (F1) of said frame period (F) and at a second non-zero brightness level (L2) during a second sub-period (F2) of said frame period (F), the time averaged sum of said brightness levels (L1,L2) being substantially equal to said overall brightness level.
2. Active matrix display device (6) according to claim 1, wherein said display (2) is a colour display and said subset (S) is defined by colour (R,G,B).
- 20 3. Active matrix display device (6) according to claim 1, wherein said device (6) is adapted to determine one or more particular areas (A) of said display and said subset is defined by said areas.
- 25 4. Active matrix display device (6) according to claim 1, wherein said device (6) is adapted to determine the total time during which said display pixels (3) have had a light output and said subset (S) is defined by said total time.
- 30 5. Active matrix display device (6) according to claim 1, wherein said first brightness level (L1) exceeds said second brightness level (L2).

6. Active matrix display device (6) according to claim 1, wherein said first sub-period (F1) has a shorter duration than said second sub-period (F2).
5. 7. Active matrix display device (6) according to claim 1, wherein said device (6) is adapted to supply a select signal (18) for selecting said display pixels (3) of said subset (S), said select signal (18) comprising at least a first select signal (18') triggering said first sub-period (F1) and a second select signal (18'') triggering said second sub-period (F2).
10. 8. Active matrix display device (6) according to claim 1, wherein said display pixels (3) comprise current emissive elements (14) driven by drive elements (T2) and said device (6) is adapted to vary a voltage (13;15) for said drive elements (T2) such that said at least one subset (S) of current emissive elements (14) is driven to at least said first brightness level (L1) during said first sub-period (F1) and said second brightness level (L2) during said second sub-period (F2).
15. 9. Active matrix display device (6) according to claim 1, wherein said display (2) is an active matrix liquid crystal display, said device (6) comprising a backlight (20) and being adapted to control said backlight (20) such that said light output (L) of said display pixels (3) of said at least one subset (S) yields said first brightness level (L1) during said first sub-period (F1) and said second brightness level (L2) during said second sub-period (F2).
20. 10. Active matrix display device (6) according to claim 9, wherein said display (2) is a colour display and said backlight (20) is a LED-backlight or a colour sequential backlight.
25. 11. Active matrix display device (6) according to claim 1, wherein said device (6) is adapted to generate said light output (L) such that said second brightness level (L2) has a brightness that is 30% or less than said first brightness level (L1).

12. Electronic device (1) comprising an active matrix display device (6) according to any one of the preceding claims.